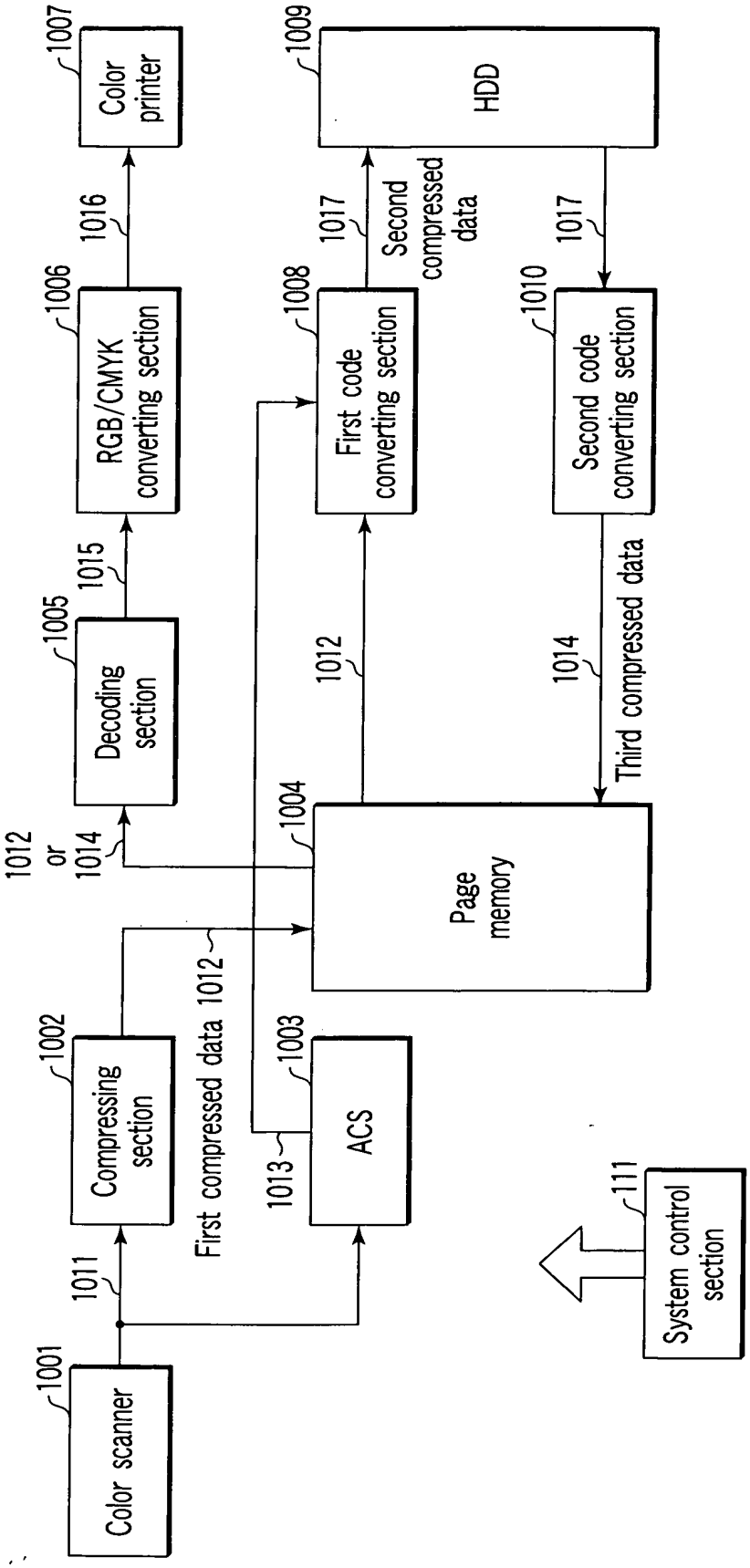

FIG. 1

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JUL 30 2004
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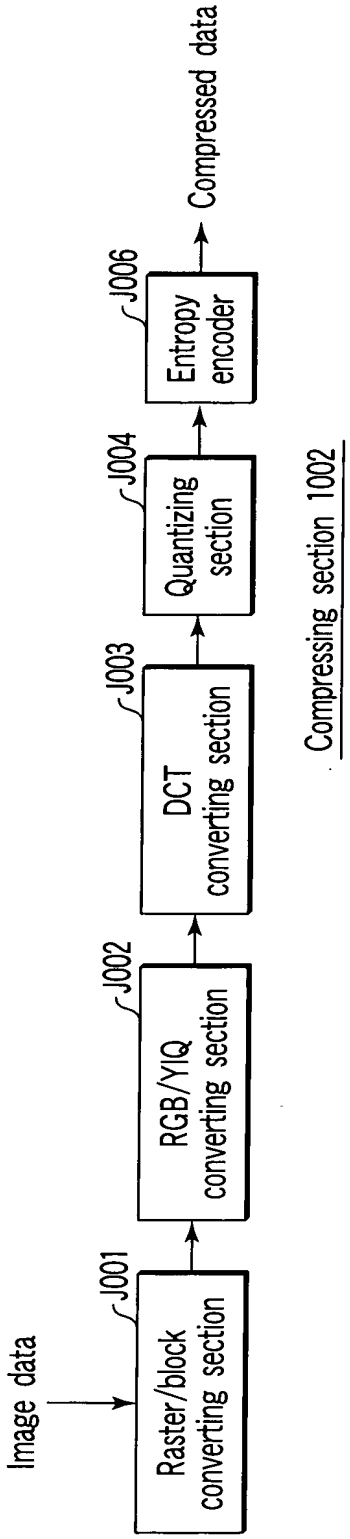
Image data
J001
Raster/block converting section
J002
RGB/YIQ converting section
J003
DCT converting section
J004
Quantizing section
J006
Entropy encoder
Compressed data
Compressing section 1002

FIG. 2

Title: APPARATUS FOR IMAGE PROCESSING
Inventor(s): Sunao TABATA et al.
Appl. No.: 10/806,454

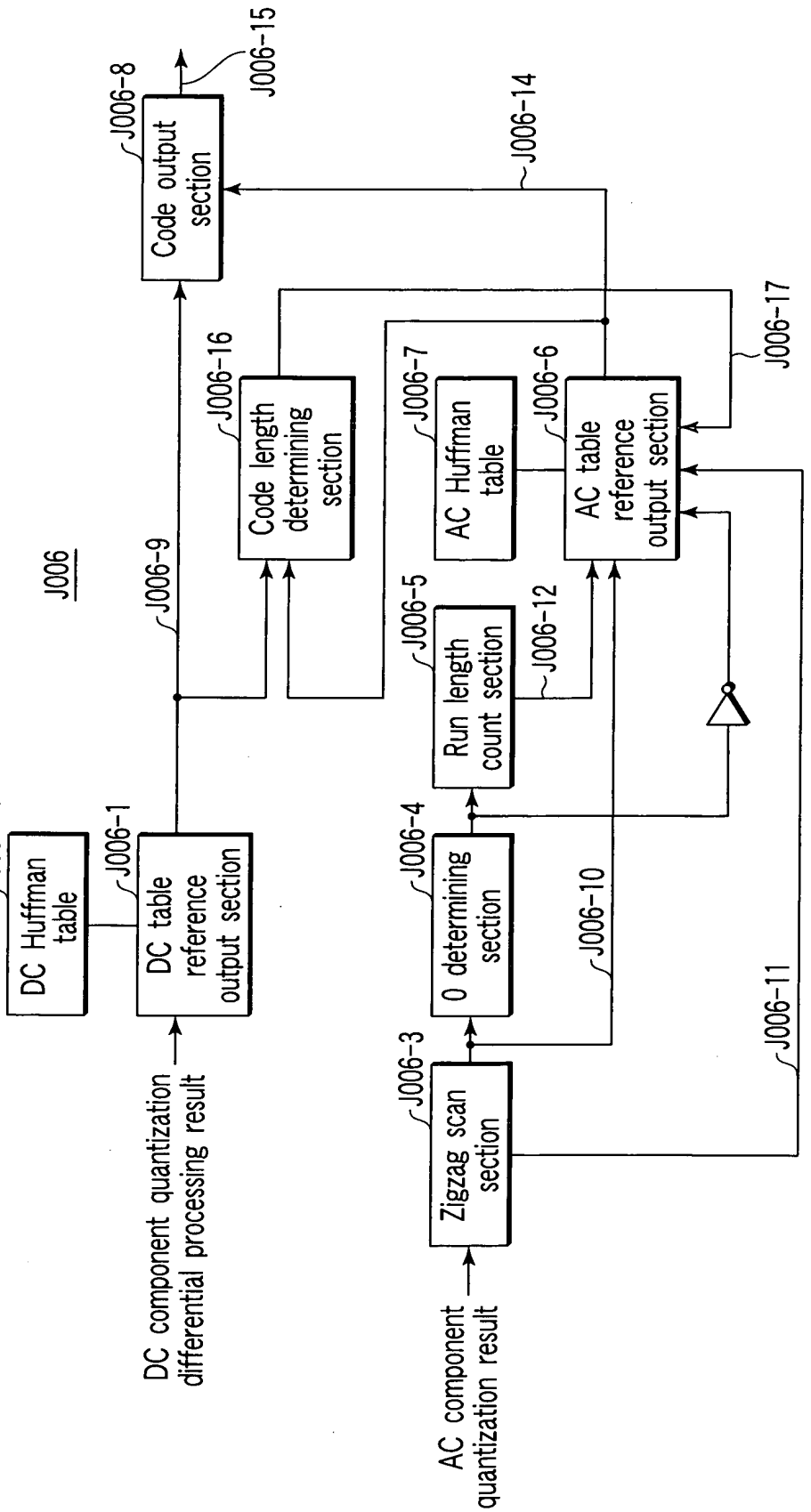

FIG. 3

Title: APPARATUS FOR IMAGE PROCESSING
Inventor(s): Sunao TABATA et al.
Appl. No.: 10/806,454

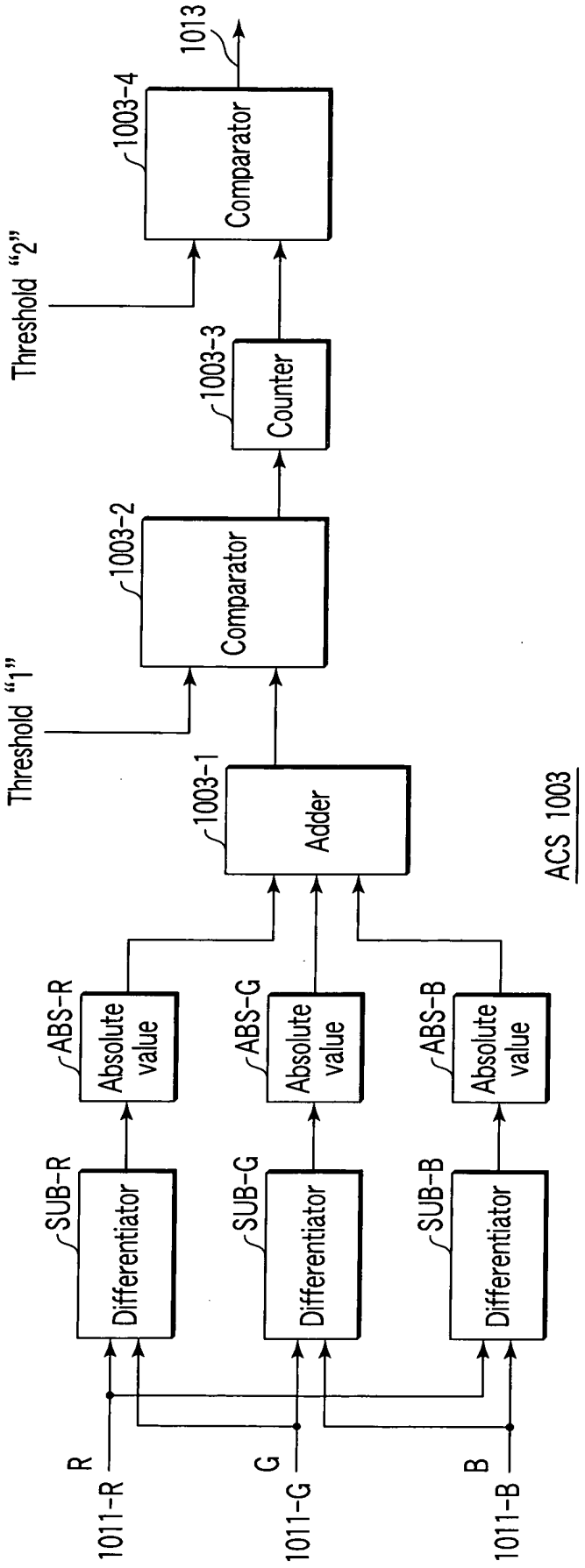

FIG. 4

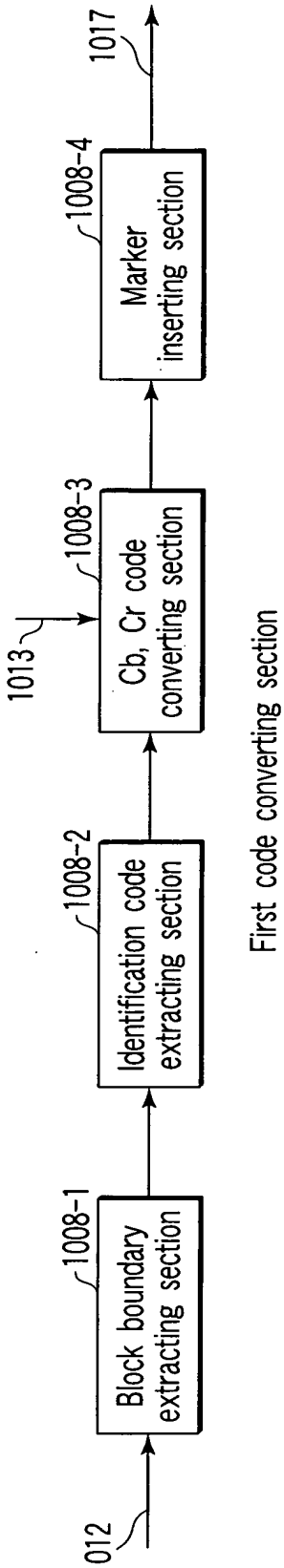
1012
1008-1
Block boundary extracting section
1008-2
Identification code extracting section
1013
1008-3
Cb, Cr code converting section
1008-4
Marker inserting section
1017
First code converting section

FIG. 5

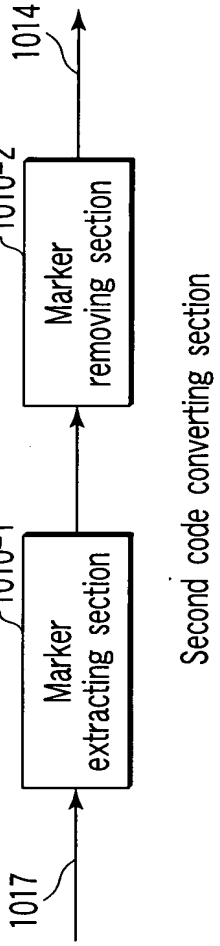
1017
1010-1
Marker extracting section
1010-2
Marker removing section
1014
Second code converting section

FIG. 6

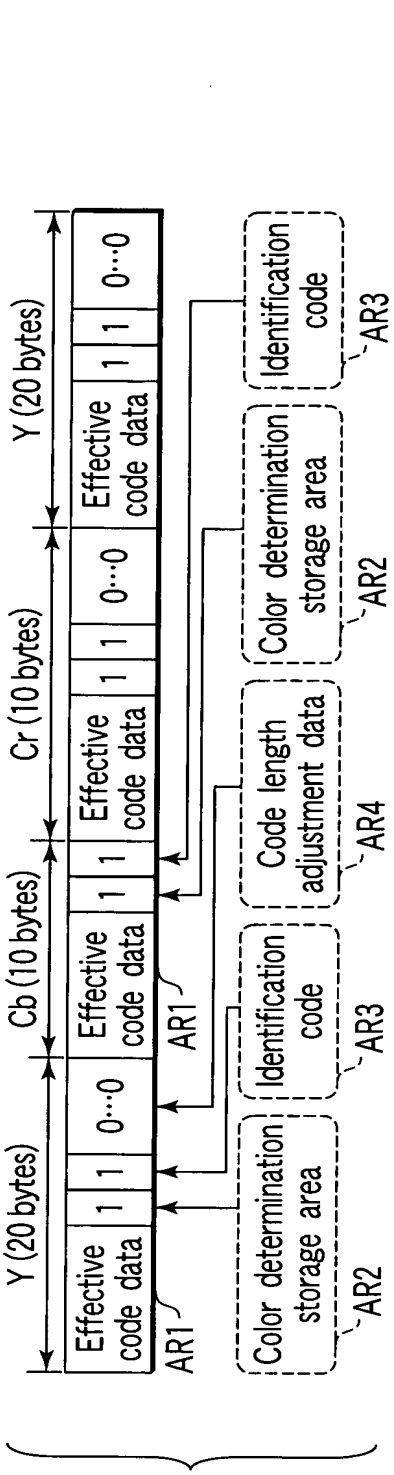

FIG. 7A

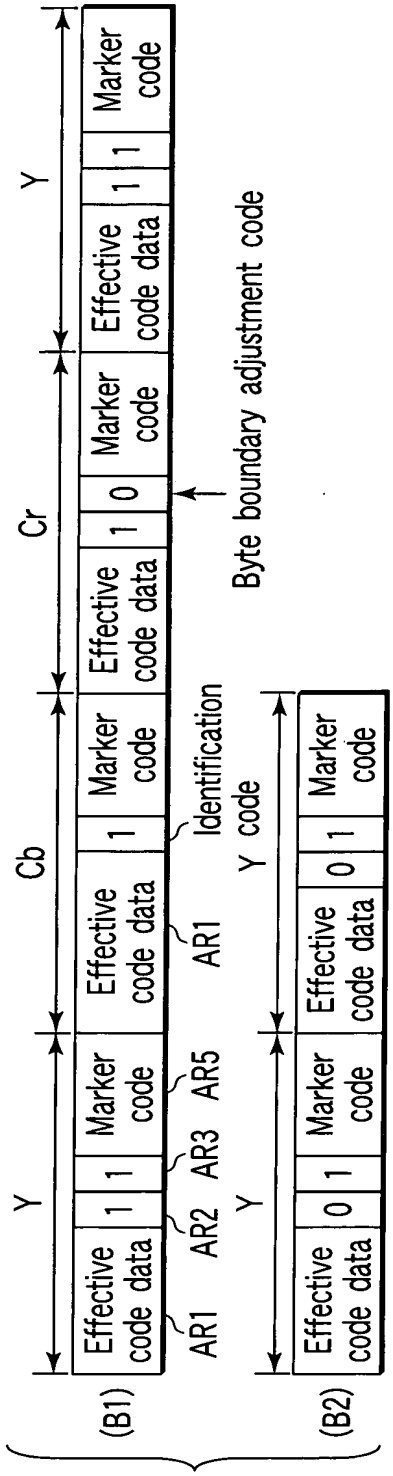

FIG. 7B

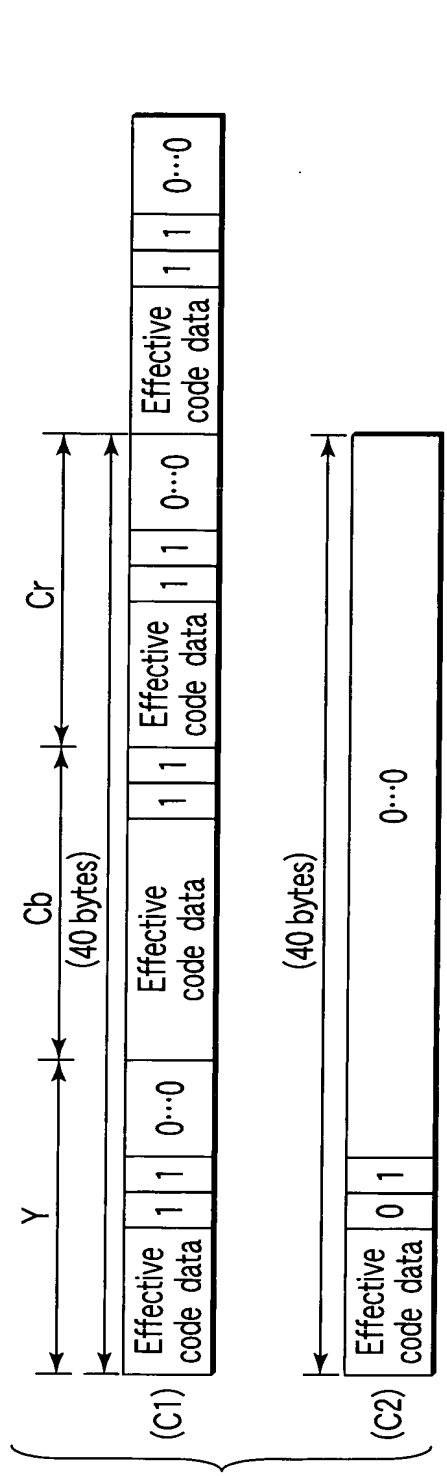

FIG. 7C

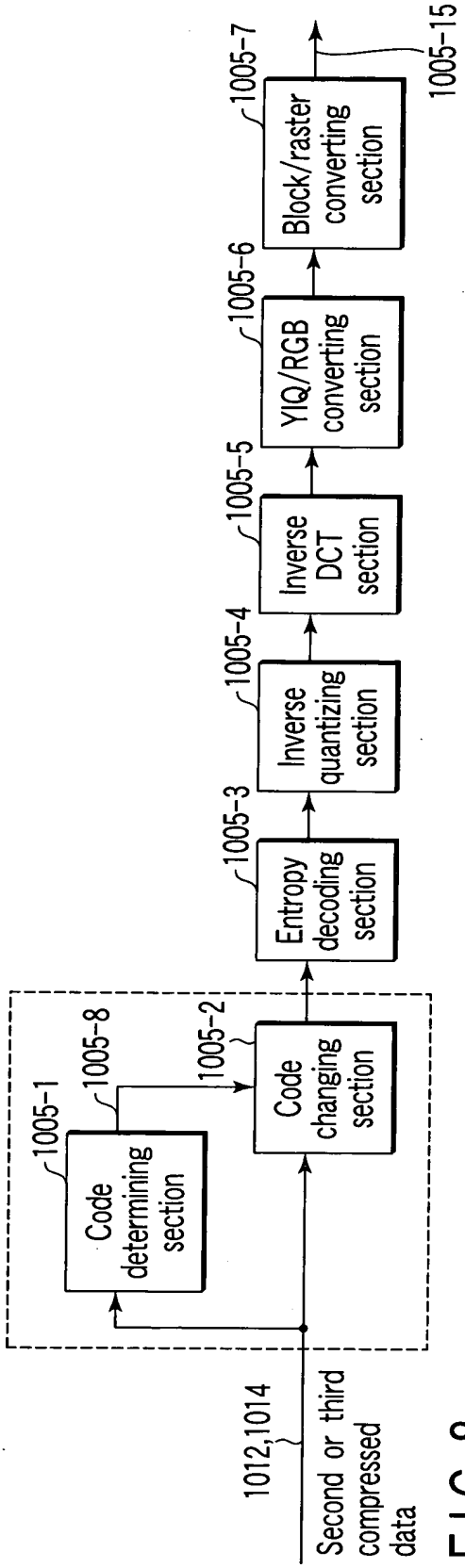
1012,1014
Second or third compressed data
1005-1
Code determining section
1005-8
1005-2
Code changing section
1005-3
Entropy decoding section
1005-4
Inverse quantizing section
1005-5
Inverse DCT section
1005-6
YIQ/RGB converting section
1005-7
Block/raster converting section
1005-15

FIG. 8

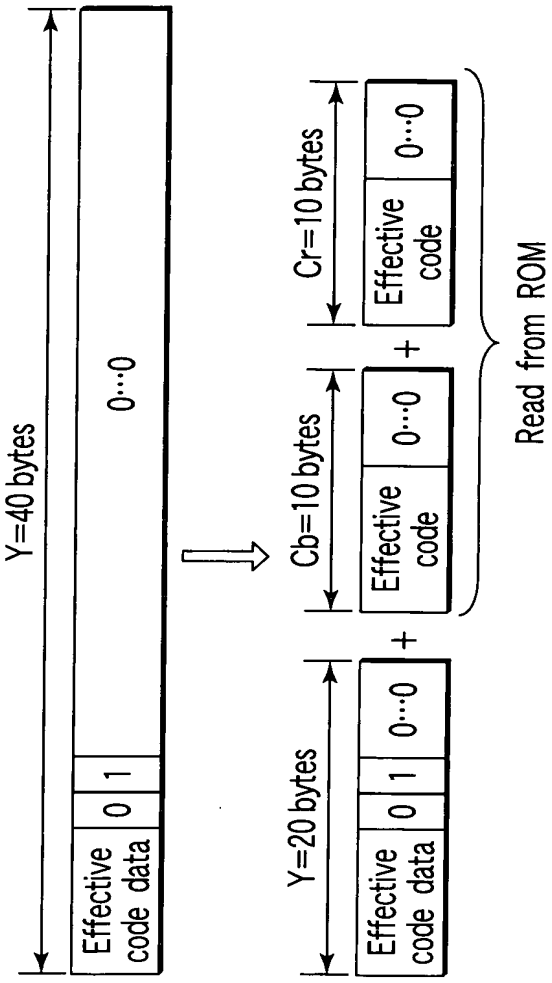
Y=40 bytes
Effective code data
0
1
0···0
Y=20 bytes
Effective code data
0
1
0···0
+
Cb=10 bytes
Effective code
0···0
+
Cr=10 bytes
Effective code
0···0
Read from ROM

FIG. 9

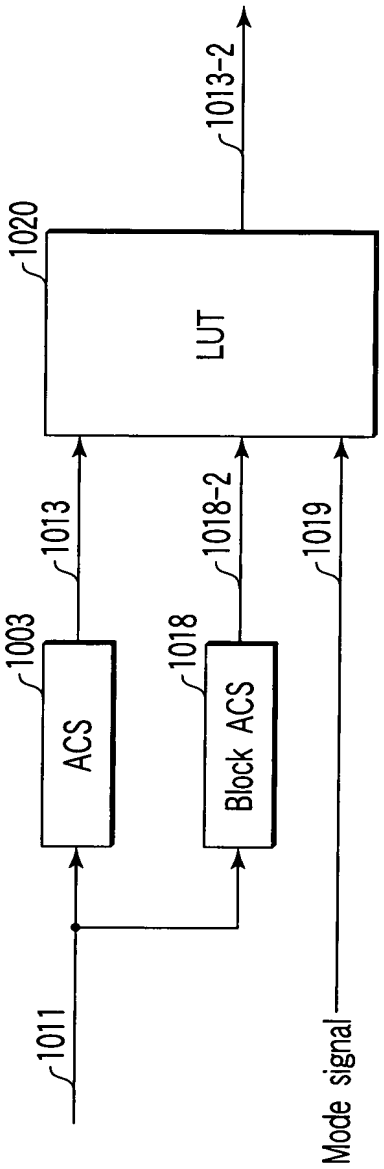

FIG. 10

Input			Output	
Compression mode signal 1019	Entire ACS	Block ACS	Block determination	
ACS	0	0	0	
ACS	0	1	0	
ACS	1	0	0	
ACS	1	1	1	
Color	—	0	0	
Color	—	1	1	
Monochromatic	—	—	0	

FIG. 11

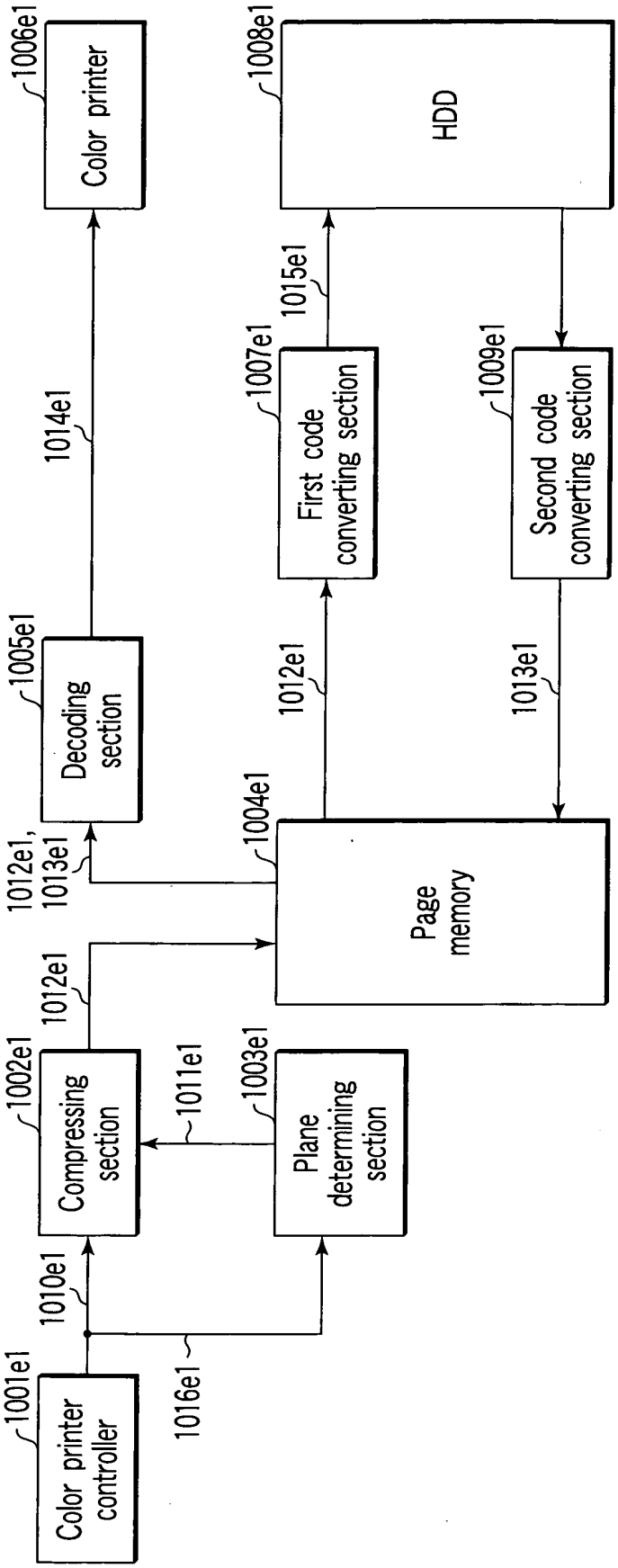
1006e1
Color printer
1008e1
HDD
1015e1
1007e1
First code converting section
1009e1
Second code converting section
1014e1
1005e1
Decoding section
1012e1
1013e1
1012e1, 1013e1
1004e1
Page memory
1012e1
1002e1
Compressing section
1011e1
1003e1
Plane determining section
1010e1
1001e1
Color printer controller
1016e1

FIG. 12

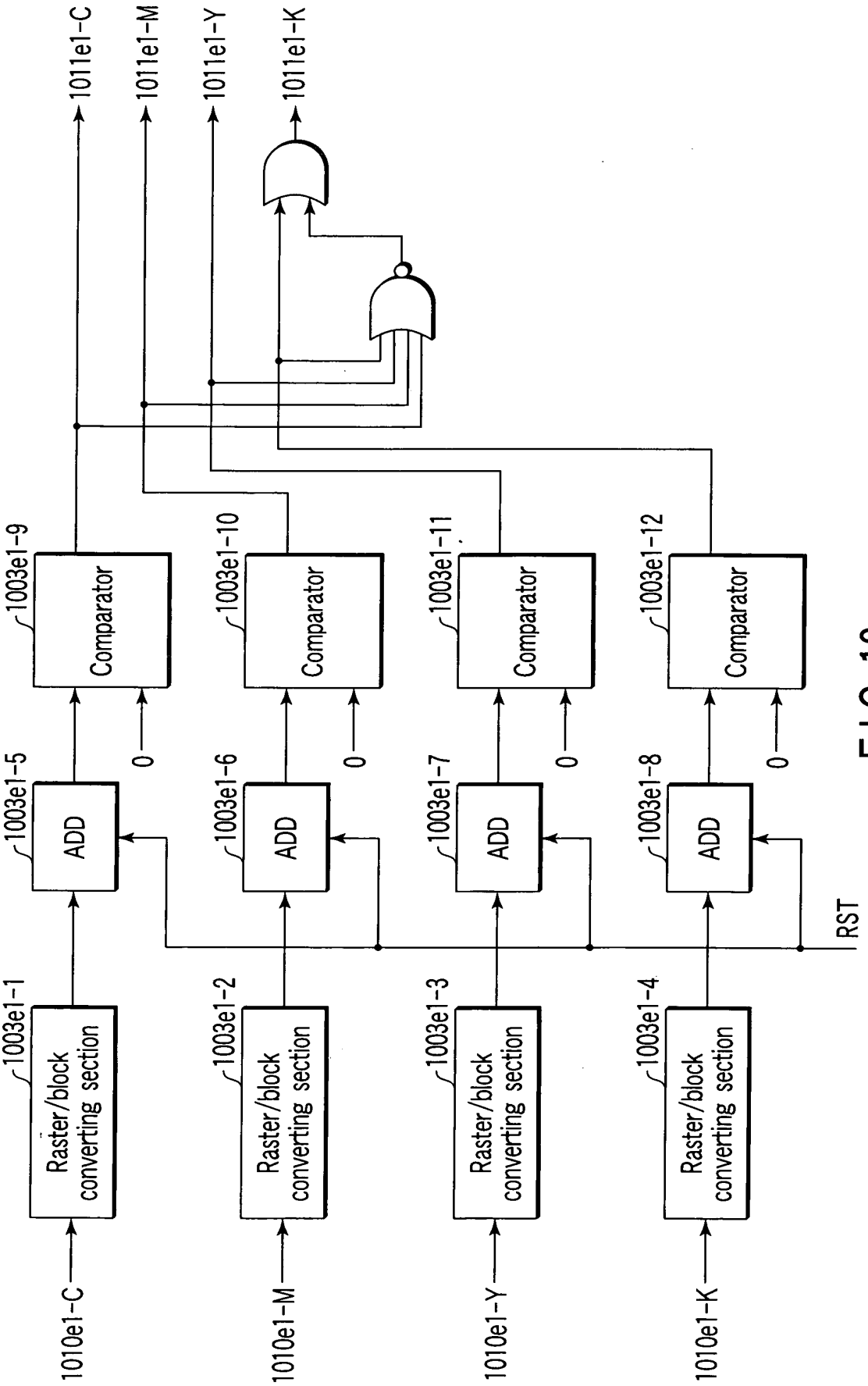
1010e1-C
1010e1-M
1010e1-Y
1010e1-K
1003e1-1
1003e1-2
1003e1-3
1003e1-4
Raster/block converting section
1003e1-5
1003e1-6
1003e1-7
1003e1-8
ADD
1003e1-9
1003e1-10
1003e1-11
1003e1-12
Comparator
0
RST
1011e1-C
1011e1-M
1011e1-Y
1011e1-K

FIG. 13

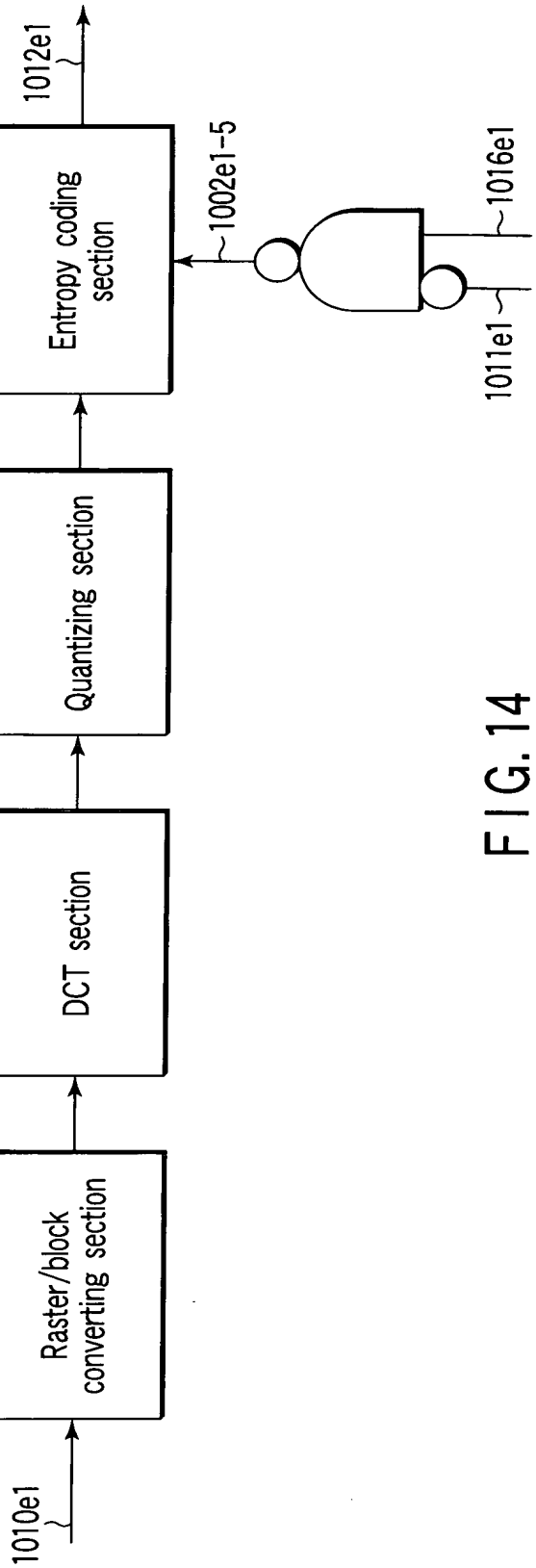
1010e1
1002e1-1
Raster/block converting section
1002e1-2
DCT section
1002e1-3
Quantizing section
1002e1-4
Entropy coding section
1002e1-5
1012e1
1016e1
1011e1

FIG. 14

First compressed data

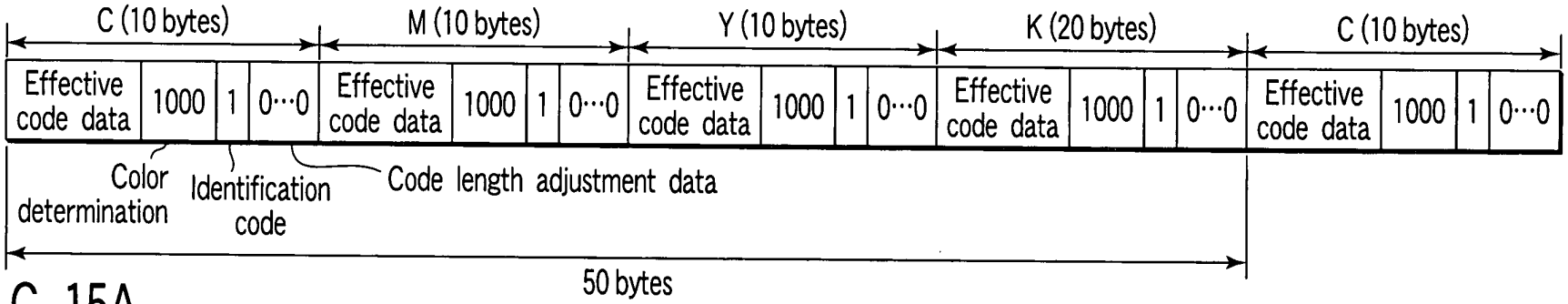

FIG. 15A

888

Second compressed data

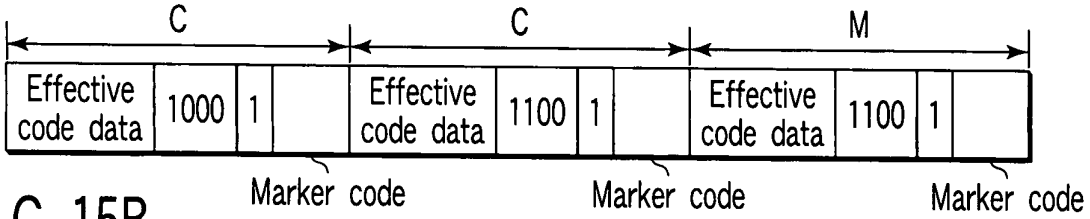

FIG. 15B

Third compressed data

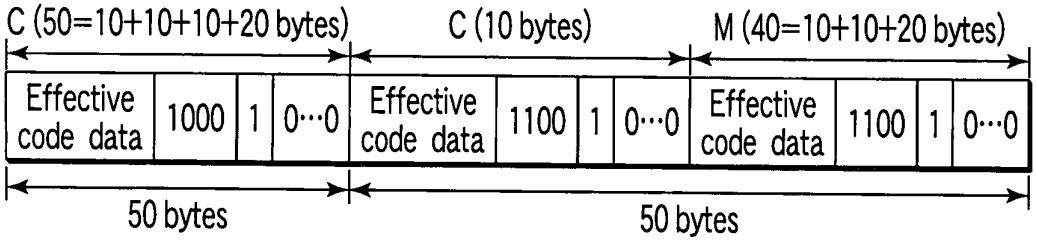

FIG. 15C

Title: APPARATUS FOR IMAGE PROCESSING
Inventor(s): Sunao TABATA et al.
Appl. No.: 10/806,454

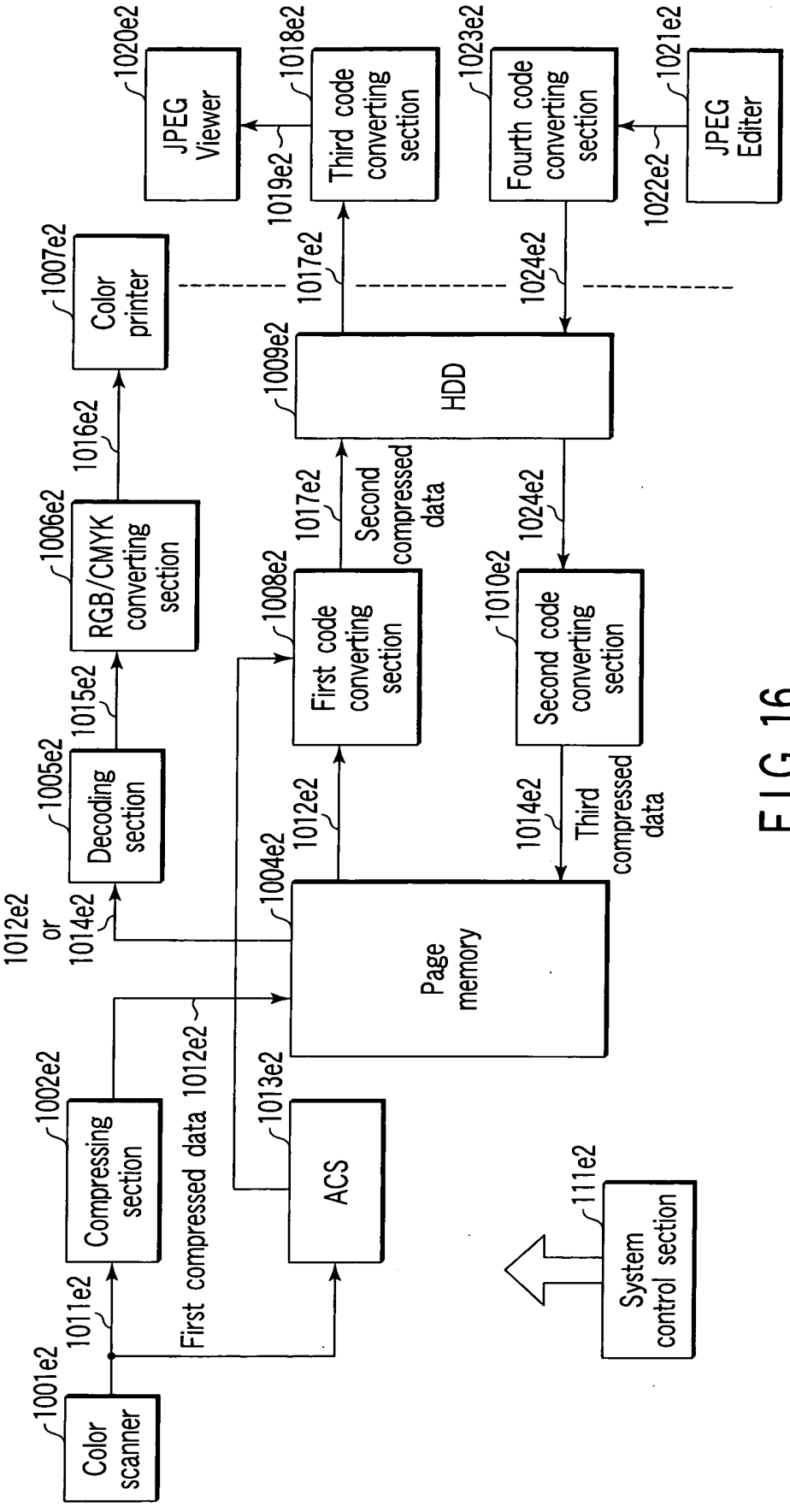

FIG. 16

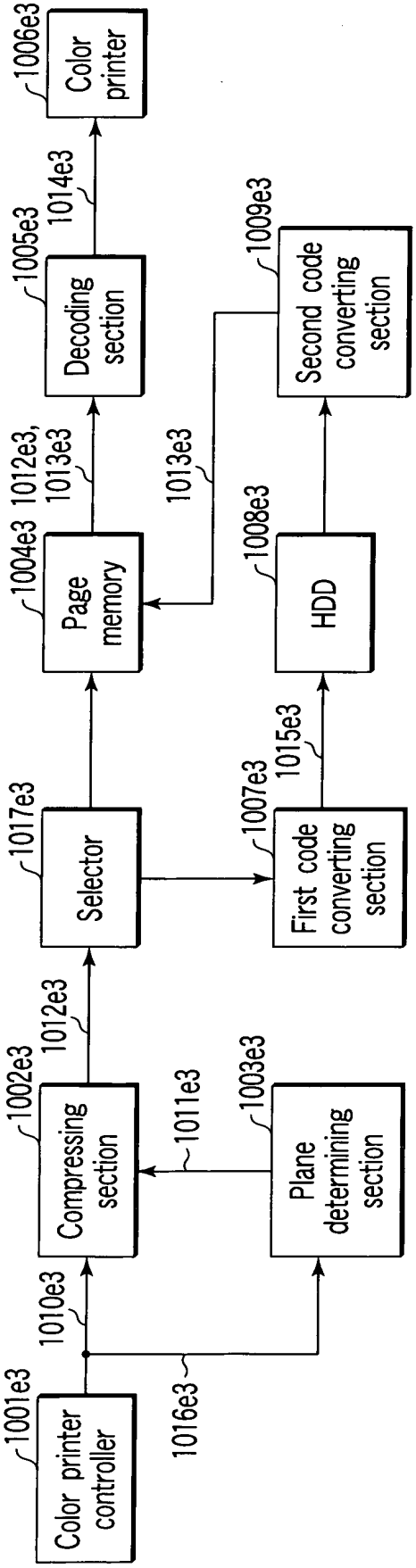
1001e3
Color printer controller
1016e3
1010e3
1002e3
Compressing section
1012e3
1011e3
1003e3
Plane determining section
1017e3
Selector
1004e3
Page memory
1012e3, 1013e3
1005e3
Decoding section
1014e3
1006e3
Color printer
1007e3
First code converting section
1015e3
1008e3
HDD
1013e3
1009e3
Second code converting section

FIG. 17

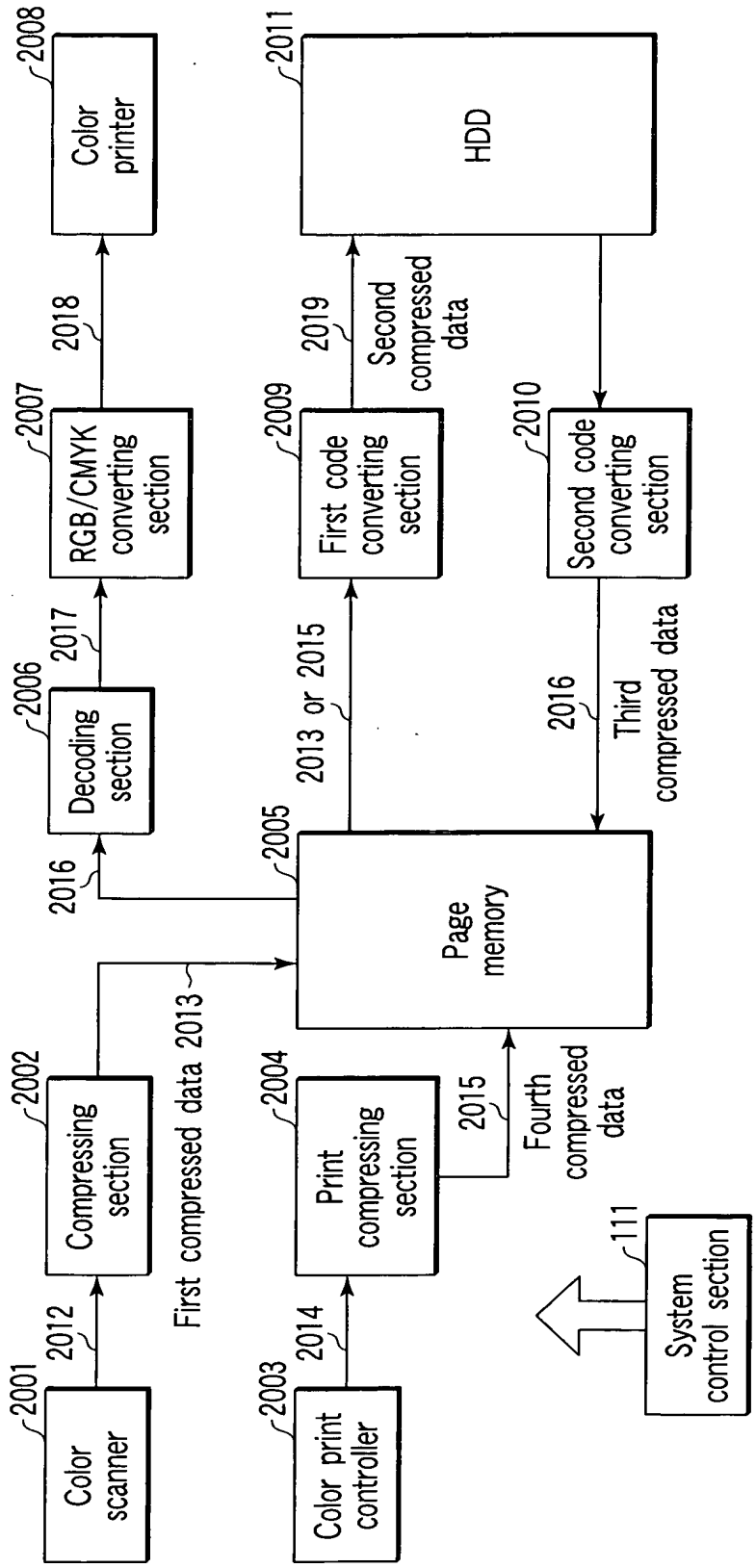
2001
Color scanner
2012
2002
Compressing section
First compressed data 2013
2003
Color print controller
2014
2004
Print compressing section
2015
Fourth compressed data
111
System control section
2005
Page memory
2016
2006
Decoding section
2017
2007
RGB/CMYK converting section
2018
2008
Color printer
2013 or 2015
2009
First code converting section
2019
Second compressed data
2011
HDD
2016
Third compressed data
2010
Second code converting section

FIG. 18

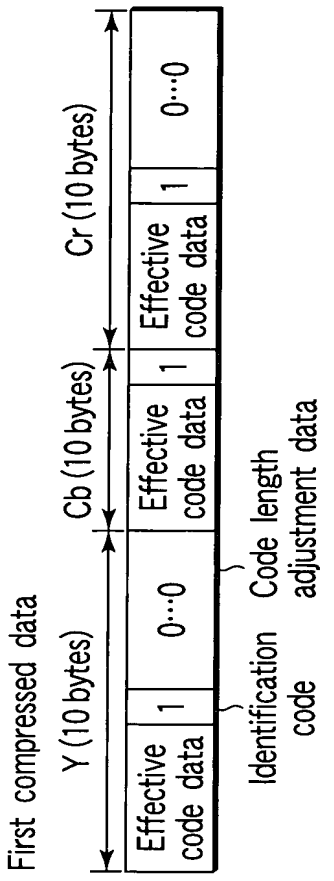

FIG. 19A

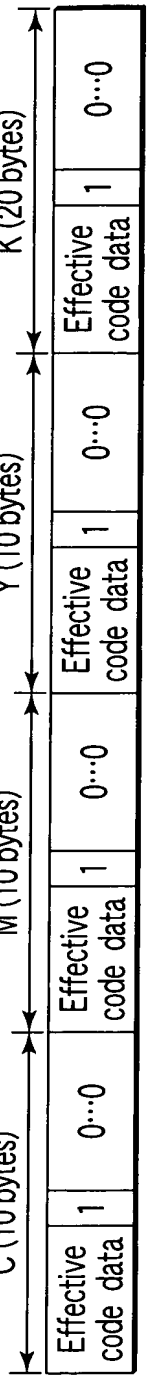

FIG. 19B

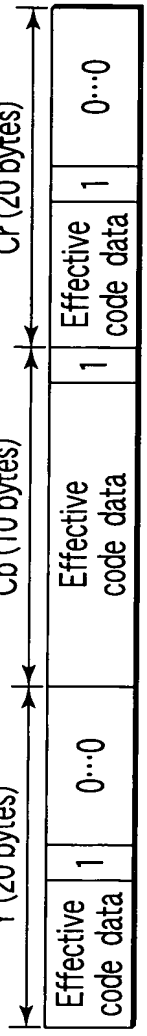

FIG. 19C

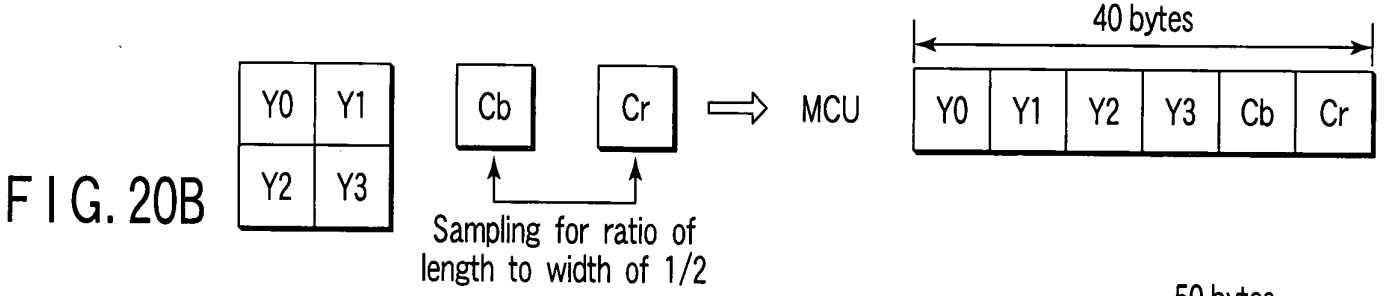

FIG. 20B

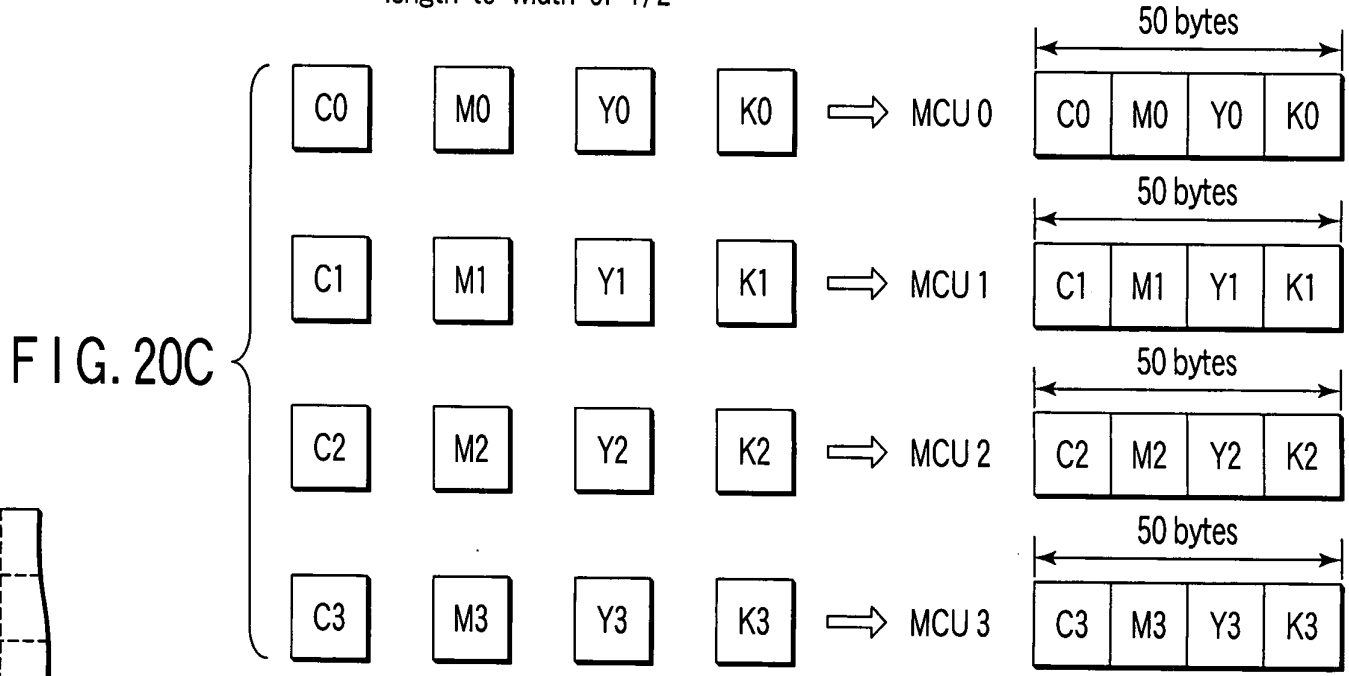

FIG. 20C

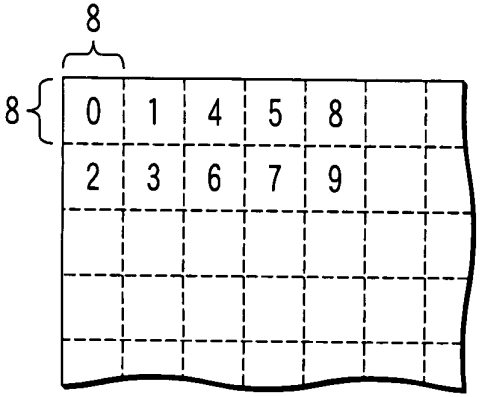

FIG. 20A

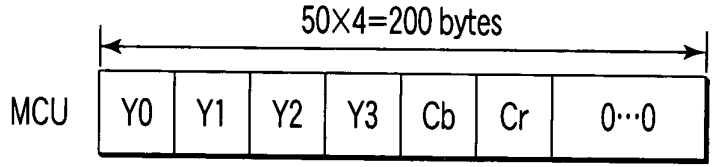

FIG. 20D

FIG. 21A

FIG. 21B

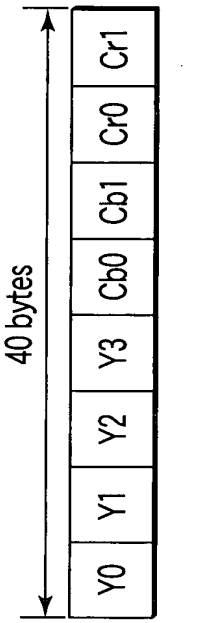

FIG. 21C

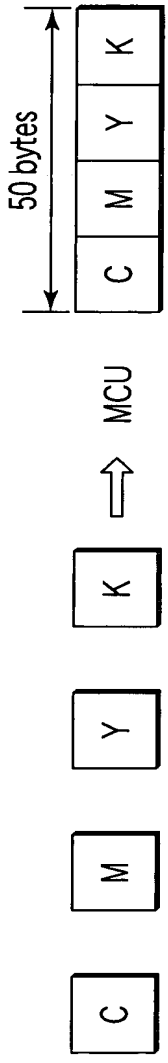

FIG. 21D

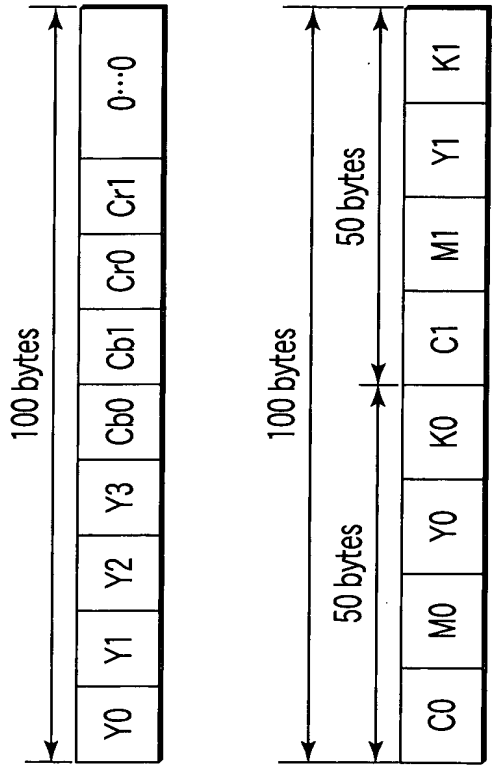

FIG. 21E

2001e1
Color scanner
2012e1
2002e1
Compressing section
First compressed data 2013e1
2003e1
Color print controller
2014e1
111
System control section
2005e1
Page memory
2016e1
2006e1
Decoding section
2017e1
2007e1
RGB/CMYK converting section
2018e1
2008e1
Color printer
2013e1 or 2015e2
2009e1
First code converting section
2019e1
Third compressed data
2011e1
HDD
2016e1
2010e1
Second code converting section
Fourth compressed data

FIG. 22

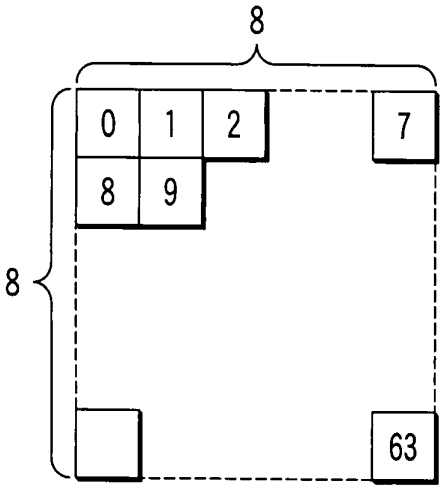

FIG. 23A

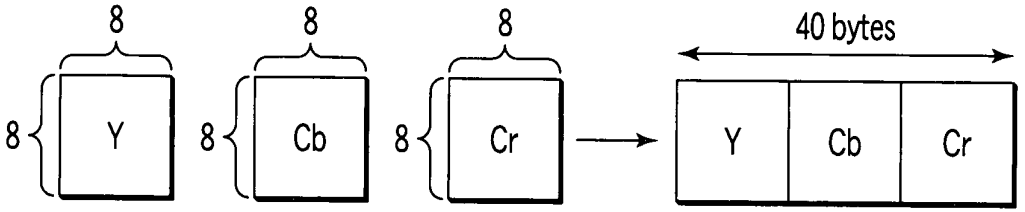

FIG. 23B

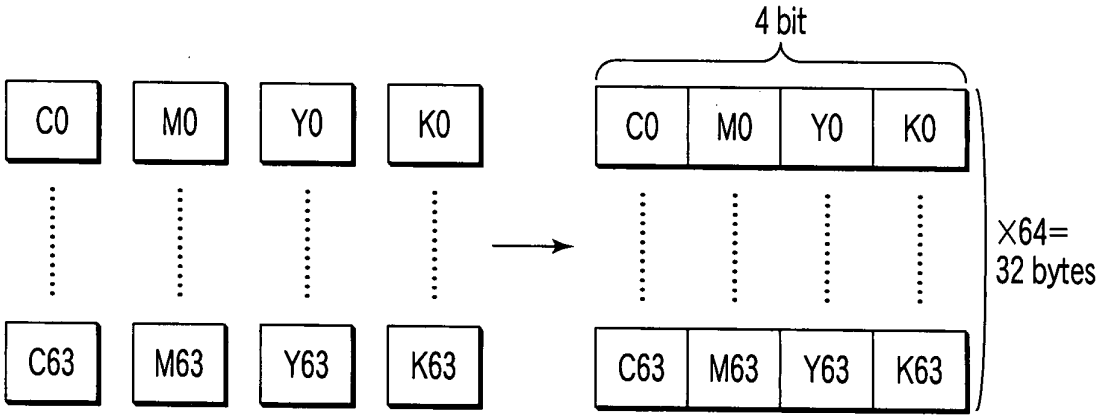

FIG. 23C

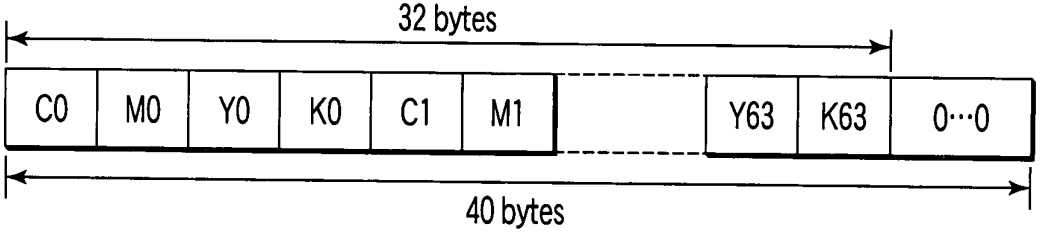

FIG. 23D

Title: APPARATUS FOR IMAGE PROCESSING
Inventor(s): Sunao TABATA et al.
Appl. No.: 10/806,454

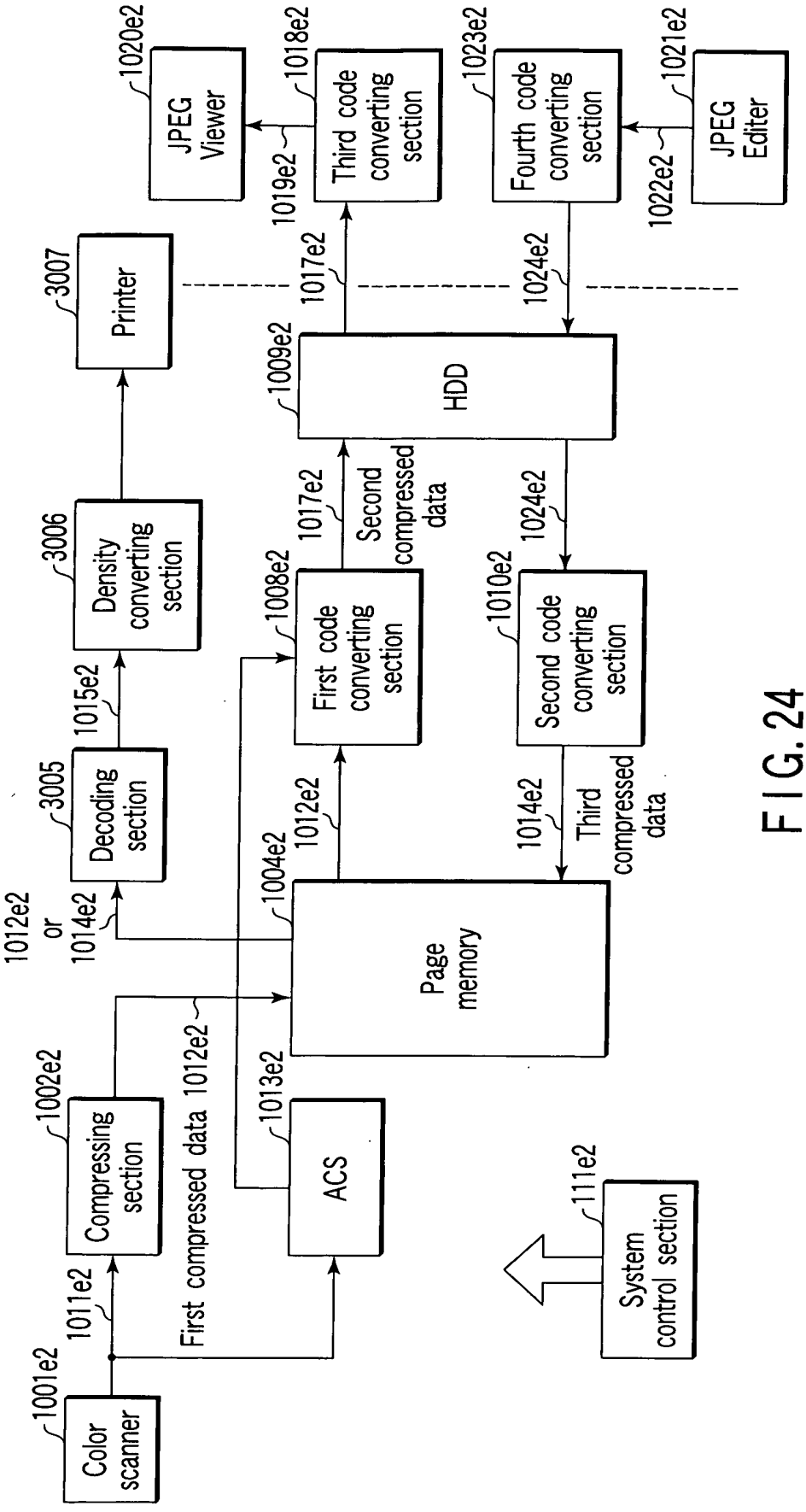
1001e2
Color scanner
1011e2
1002e2
Compressing section
First compressed data 1012e2
1013e2
ACS
1012e2 or 1014e2
3005
Decoding section
1015e2
3006
Density converting section
3007
Printer
1004e2
Page memory
1012e2
1008e2
First code converting section
1017e2
Second compressed data
1009e2
HDD
1017e2
1018e2
Third code converting section
1019e2
1020e2
JPEG Viewer
1014e2
1010e2
Second code converting section
1024e2
Third compressed data
1024e2
1023e2
Fourth code converting section
1022e2
1021e2
JPEG Editer
111e2
System control section

FIG. 24